

CLAIMS

1. A process for preparing activated NK cells *in vitro*, which comprises the steps of:
 - a) isolating lymphocytes from a subject; and
 - b) incubating the lymphocytes together with a cancer cell which expresses an immunoglobulin superfamily gene, thereby activating NK cells included in the isolated lymphocytes,wherein the cancer cell is deficient or decreased in the expression of a class I antigen, and wherein the immunoglobulin superfamily gene encodes a cell adhesion molecule.
2. The process of claim 1, wherein the cancer cell is selected from a group consisting of K562 cells and Daudi cells, and the immunoglobulin superfamily gene is selected from a group consisting of B7 gene, CD40, LFA-1, and a combination thereof.
3. A process for activating NK cells that circulates in a subject, which comprises administering the activated NK cells as prepared according to the process of claim 1 or 2 to the subject.
4. A process for immunostimulation in a cancer patient, which comprises the steps of:
 - a) isolating lymphocytes from the patient;
 - b) incubating the lymphocytes together with a cancer cell which expresses an immunoglobulin superfamily gene, thereby activating NK cells included in the isolated lymphocytes; and
 - c) administering the activated NK cells to the same cancer patient,wherein the cancer cell is deficient or decreased in the expression of a class 1 antigen, and wherein the immunoglobulin superfamily gene encodes a cell adhesion molecule.
5. The process of claim 4, wherein the cancer cell is selected from a group consisting of K562 cells and Daudi cells, and the immunoglobulin superfamily gene is selected from a group consisting of B7 gene, CD40, LFA-1, and a combination thereof.

6. The process for immunostimulation of claim 4 or 5, wherein the steps thereof are repeated three times or more.
7. A method for treating a cancer disease in a patient, which comprises the steps of:
 - a) isolating lymphocytes from the patient;
 - b) incubating the lymphocytes together with a cancer cell which expresses an immunoglobulin superfamily gene, thereby activating NK cells included in the isolated lymphocytes; and
 - c) administering the activated NK cells to the same cancer patient,wherein the cancer cell is deficient or decreased in the expression of a class I antigen, and wherein the immunoglobulin superfamily gene encodes a cell adhesion molecule.
8. The method of claim 7, wherein the cancer cell is selected from a group consisting of K562 cells and Daudi cells, and the immunoglobulin superfamily gene is selected from a group consisting of B7 gene, CD40, LFA-1, and a combination thereof.
9. The method for treating a cancer disease according to claim 7 or 8, wherein the steps thereof are repeated three times or more.
10. A process for inducing the proliferation of activated NK cells *in vitro*, which comprises:
 - a) isolating lymphocytes from a subject; and
 - b) incubating the lymphocytes together with a cancer cell which expresses an immunoglobulin superfamily gene, thereby activating NK cells included in the isolated lymphocytes,wherein the cancer cell is deficient or decreased in the expression of a class I antigen, and wherein the immunoglobulin superfamily gene encodes a cell adhesion molecule.
11. The process of claim 10, wherein the cancer cell is selected from a group consisting of K562 cells and Daudi cells, and the immunoglobulin superfamily gene is selected from a group consisting of B7 gene, CD40, LFA-1, and a combination thereof.

12. The process of claim 10 or 11, wherein the proliferation of Th1 cells are further induced.

13. The process of claim 10 or 11, wherein the subject is a healthy subject, and the activated NK cells are reserved in preparation for possible cancer diseases.

14. A method for treating a cancer disease in a patient, which comprises administering an aliquot of the reserved activated NK cells according to claim 13 to the patient, wherein the reserved activated NK cells were obtained from the patient when the patient was previously healthy.